**

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**University Village, Plot 91 Cadastral Zone, NnamdiAzikiwe Express Way, Jabi - Abuja.**

**FACULTY OF SCIENCES**

**ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT**

**JANUARY/FEBRUARY 2018 EXAMINATIONS**

**COURSE CODE: ESM 304 CREDIT UNITS: 3**

**COURSE TITLE: RESEARCH METHODS AND FIELD TRIP TIME ALLOWED: 2:30mins**

**Instruction:** Attempt question number one (1) and any other three (4).

1. With relevant examples, discuss the major elements of research **(22marks).**

**2a**. How is conclusion different from summary in a research report.

**b.** Distinguish between the following in research design

i. Primary and secondary sources of data

ii. Survey and experimental designs

**(12marks)**

**3**. Justify the view that research problem is the first and foremost step in the research process. Discuss **(12marks)**

**4.** a. Explain the role of report writing in the research design process.

b. Enumerate the essentials of a research proposal in environmental science.

c. Explain the concepts of validity and reliability of data processing in environmental sciences.

**(12marks)**

1. Explain in detail, any one of the sampling techniques that will be most appropriate for a researchstudy you intend to carry out.**(12marks)**

**6.** With relevant examples, discussthe concept of correlation research**(12marks)**